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METHOD AND APPARATUS FOR DETERMINING A NETWORK TOPOLOGY IN THE PRESENCE OF NETWORK ADDRESS TRANSLATION

ABSTRACT OF THE DISCLOSURE

The present invention may be used for determining a topology of a network in the presence of network address translation. From an active client behind a translating device, communications are initiated that effect the network address translation. The communications are monitored beyond the translating device to infer partitioning of servers into equivalence sets relative to the network topology induced by the network address translation. Active clients behind the translating device may include a respective actual sending address in a message sent to a server beyond the translating device. The server beyond the translating device distinguishes between communications affected by and not affected by network address translation, which may include comparing an apparent source address of a message against an actual address provided in the message by the active client behind the translation device. The external server may also distinguish between active and passive client messages. The server server may cause a message to a passive client to be redirected to an active client; the active client, in turn, communicates to the external server. The external server stores addresses of devices in translated address sets, which may be maintained in a database and managed in a database manager.